CIVIL-TECH CONSULTANTS AND ENGINEERS

Building & Highway Material Testing Laboratory

An ISO 9001:2008 Certified Company

NABL - Accredited Laboratory as per ISO / IEC-17025 : 2005

JAS-ANZ BSCIC ISO 9001 REGISTERED

Job No.: CTCE/BBMP/KRIDL/W.No.13/WMM/Gradation/2017-18 26.12.2017

TEST REPORT ON GRADATION OF WET MIX MACADAM

* Customer	:	**Asst. Executive Engineer,** Shettyhalli Sub Division, BBMP, Bangalore.
* Agency	:	**Technical Manager (West),** KRIDL, Bangalore.
* Name of Work	:	Improvements to Roads and asphalting at pipeline road right side and other roads in Mllasandra Ward No.13 in Shettyhalli Sub Division , BBMP, Bangalore.
* Reference	:	BBMP/EE/DD/WO/146/2017-18 Dated: 21.12.2017
Sample ID	:	Wet Mix Macadam
Technical Reference	:	IS 2386 (part-1)1963 (RA-2016)
Date of Testing	:	26.12.2017

Oven Dry Wt (gm): **5000**

Is Sieve Size in mm	Weight Retained (gm)	Cumulative Weight Retained (gm)	Cumulative % of Retained	Cumulative % of Passing	Spec.Limits As per Morth Table 400-11
53	0	0	0	100	100
45	155	155	3.1	96.9	95-100
22.4	1520	1675	33.50	66.50	60-80
11.2	1090	2765	55.30	44.70	40-60
4.75	600	3365	67.30	32.70	25-40
2.36	500	3865	77.30	22.70	15-30
0.600	520	4385	87.70	12.30	8-22
0.075	390	4775	95.50	4.50	0-8

*Information is furnished by the Customer/Representative.

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Note:

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⇒Any Query regarding the report must be reported within 30 days from the date of testing.

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Civil-tech Consultants & Engineers
#23/14, 7th Cross 3rd Stage 4th Block,
Shakthi Ganapathinagar,
Basaveshwaranagar, Bangalore-560 079.

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JAS-ANZ BSCIC ISO 9001 REGISTERED

Job No.: CTCE/BBMP/KRIDL/W.No.13/WMM/AIV/2017-18 26.12.2017

TEST REPORT ON IMPACT VALUE OF AGGREGATE

* Customer	:	**Asst. Executive Engineer,** Shettyhalli Sub Division, BBMP, Bangalore.
* Agency	:	**Technical Manager (West),** KRIDL, Bangalore.
* Name of Work	:	Improvements to Roads and asphalting at pipeline road right side and other roads in Mllasandra Ward No.13 in Shettyhalli Sub Division , BBMP, Bangalore.
* Reference	:	BBMP/EE/DD/WO/146/2017-18 Dated: 21.12.2017
* Sample ID	:	Wet Mix Macadam
Technical Reference	:	IS: 2386 Part IV
Date of Testing	:	26.12.2017

Sl No.	Details	Trial No. 1	Trial No. 2	Average
1	Total weight of aggregate sample filling the cylindrical measure = W_1 g	386	388	
2	Weight of agregate passing 2.36 mm sieve after the test = W_2 g	82	84	
3	Weight of aggregate retained 2.36 mm sieve after the test = W_3 g	304	304	
4	Aggregate Impact value = percent fines 100* (W2/W1)%	21.24	21.65	**21.45**

*Information is furnished by the Customer/Representative.

Comments:

→ Maximum allowable Aggregate Impact value for Wet Mix Macadam is 30%

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Job No.: CTCE/BBMP/KRIDL/W.No.13/WMM/Shape.T/2017-18 26.12.2017

TEST REPORT ON FLAKINESS INDEX & ELONGATION INDEX OF COARSE AGGREGATES

*** Customer**	:	**Asst. Executive Engineer,** Shettyhalli Sub Division, BBMP, Bangalore.
*** Agency**	:	**Technical Manager (West),** KRIDL, Bangalore.
*** Name of Work**	:	Improvements to Roads and asphalting at pipeline road right side and other roads in Mllasandra Ward No.13 in Shettyhalli Sub Division , BBMP, Bangalore.
*** Reference**	:	BBMP/EE/DD/WO/146/2017-18 Dated: 21.12.2017
*** Sample ID**	:	Wet Mix Macadam
Technical Reference	:	IS 2386(Part 1) 1963 (RA 2016)
Date of Testing	:	26.12.2017

Sl.No.	Description	Result
1	Flakiness Index	11.62%
2	Elongation Index	13.20%
3	Combined Flakiness & Elongation Index	24.82%

*Information is furnished by the Customer/Representative.

Comments:

→ Maximum allowable Flakiness & Elongation Index for Wet Mix Macadam is 30%

Note:

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AE-13

ಸಹಾಯಕ ಕಾರ್ಯಪಾಲಕ ಅಭಿಯಂತರರು
ಶೆಟ್ಟಿಹಳ್ಳಿ ಉಪವಿಭಾಗ, ಬಾಸವೇಶ್ವರನಗರ ವಲಯ
ಬೃಹತ್ ಬೆಂಗಳೂರು ಮಹಾನಗರಪಾಲಿಕೆ

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Job No.: CTCE/BBMP/KRIDL/W.No.13/CSR-01/540/QB(BM)/2017-18 11.01.2018

TEST REPORT ON DETERMINATION OF BITUMEN CHARACTERISTICS

*** Customer**	:	**Asst. Executive Engineer,** Shettyhalli Sub Division, BBMP, Bangalore.
*** Agency**	:	**Technical Manager (West),** KRIDL, Bangalore.
*** Name of work**	:	Improvements to Roads and asphalting at pipeline road right side and other roads in Mllasandra Ward No.13 in Shettyhalli Sub Division, BBMP, Bangalore.
*** Reference**	:	BBMP/EE/DD/WO/146/2017-18 Dated: 21.12.2017
*** Sample ID**	:	Bitumen – Sample2
Source/ Location	:	Hot Mix Plant, Bangalore.
Sample Received on	:	09.01.2018
Period of Testing	:	09.01.2018 to 11.01.2018

The results of the tests conducted on the bitumen sample are as follows:

Sl. No	Description	Test Method as per IS	Test Result	Requirement as per IS:73:2013
1	Penetration at 25 ^{0}C, 1/10 mm	IS :1203 -1978 (RA-2014)	68	60 to 70
2	Softening point, ^{0}C	IS :1205 -1978 (RA-2014)	47	Min. 45
3	Ductility at 27^{0}C, cm	IS :1208 -1978 (RA-2014)	100 >	Min. 50
4	Flash Point, ^{0}C	IS :1209 -1978 (RA-2014)	310	Min. 220

* Information is furnished by the Customer/Representative

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ಶೆಟ್ಟಿಹಳ್ಳಿ ಉಪವಿಭಾಗ, ದಾಸರಹಳ್ಳಿ ವಲಯ
ಬಿಬಿಎಂಪಿ ಪೀಣ್ಯ ಮುಖ್ಯರಸ್ತೆ ಬಾಲಾಜಿ

VIDYARANI P.K.
Technical Manager

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Job No: CTCE/BBMP/KRIDL/W.No.13/BM/AIV/2017-18 11.01.2018

TEST REPORT ON IMPACT VALUE OF AGGREGATES

* Customer	:	**Asst. Executive Engineer,** Shettyhalli Sub Division, BBMP, Bangalore.
* Agency	:	**Technical Manager (West),** KRIDL, Bangalore.
* Name of Work	:	Improvements to Roads and asphalting at pipeline road right side and other roads in Mllasandra Ward No.13 in Shettyhalli Sub Division, BBMP, Bangalore.
* Reference	:	BBMP/EE/DD/WO/146/2017-18 Dated: 21.12.2017
* Sample ID	:	Hot Mix Plant, Bangalore
Technical Reference	:	IS : 2386(Part -4)-1963 (RA-2011)
* Type of Mix	:	Bituminous Macadam
Date of Testing	:	11.01.2018

Sl No.	Details	Trial No.		Average
		1	2	
1	Total weight of aggregate sample filling the cylindrical measure = W_1 g	390	392	
2	Weight of agregate passing 2.36 mm sieve after the test = W_2 g	84	85	
3	Weight of aggregate retained 2.36 mm sieve after the test = W_3 g	306	307	
4	Aggregate Impact value = percent fines 100* (W2/W1)%	21.54	21.68	**21.61**

*Information is furnished by the Customer/Representative.

Comments:

→ Maximum allowable Aggregate Impact value for Bituminous Macadam is 30%

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